1. **Describe the practice proposed for recognition, and list its objectives. Detail how the practice is innovative and how it promotes high student achievement.**

The practice proposed for recognition, ***Building Construction***, deals with aspects of the building trades from excavation for foundations through rough framing, to finished trim, to window and door installation, and up through the application of roof shingles. Some electrical work is done as well as drywall work. Even though all students participating in this practice may not be pursuing a career in trades, they can benefit from this course because home repairs and remodeling are inherent in owning a home or in designing a home.

It is the intention that the application of knowledge through the study of tools, materials, and problem solving processes will allow our students to become responsible citizens within the democratic process and competent contributors to society through workplace readiness. In addition, the Department of Technology at the school, is striving to prepare its students academically to reach their potential in our industrial society by providing appropriate and rewarding programs, such as ***Building Construction***. With the enrollment of this program approaching 50% special needs students, the program realizes the limits of its student as far as four year colleges are concerned. These students, along with others who want to begin a background in the "trades", are provided for by our focus on dealing with practical application of skills and materials associated with various aspects of building construction. "Hands-on" instruction, skill development and safety principles are stressed in this program.

Additionally, the practice proposed for recognition, ***Building Construction*** is innovative due to its departure from traditional practices that identify students as being bright. This departure gives a larger picture of intelligence. Seeing the larger picture has given credibility to the way in which student talent has been identified and assessed. This digression from traditional course work and assessment has been an aid in the development of creative and intellectual talent among our students.

According to the Secretary of Labor (2001), the office's mission is to provide all American workers with the opportunity to equip themselves with the tools necessary to succeed in their careers and in whatever field they choose in this new and dynamic global economy. The school believes that the practice, ***Building Construction,*** mirrors the Department of Labor's charge. The opportunities for student success through creativity, application, synthesizing and analyzing promote higher student achievement.

Creativity in the ***Building Construction*** class is addressed through the opportunities for discovery, coping with novelty when presented with a new task, and imagination when determining the best way in which to design a piece of construction. Consequently, students are given opportunities to demonstrate application in the implementation, execution and utilization of skills needed to build and construct the assigned venture. Students in this program use analysis in the opportunities given for using judgment when evaluating projects, products, materials and tasks presented to them.

2. **List the specific Core Content Standards, including the Cross-Content Workplace Readiness Standards, addressed by the practice and describe how the practice addresses those standard (s). Provide an example to substantiate your response.**

The practice addresses the following Core Curriculum Content Standards:

1. All students will develop career planning and workplace readiness.
2. All students will use technology, information and other tools.
3. All students will use critical thinking, decision making and problem solving skills.
4. All students will develop self-management skills.
5. All students will apply safety principles.

The practice addresses career planning in Standard #1, as job opportunities for carpenters are explored. Prerequisites for carpentry as a career are explored, as well as apprenticeship programs. Personal qualifications needed to become a carpenter are also discussed.

Students use technology, information and other tools when they:

- Input basic layout with kitchen and bath wizards
- Viewing designs in 3D
- Designing multileveled decks using 3D deck 3.0
- Printing or plotting designs

Students use critical thinking, decision making and problem solving skills through the following activities:

- Establishing building lines
- Using a transit to establish elevations
- Set up a transit and grade stakes
- Create a list of materials for building deck
- Place furniture, plants and other available objects on decks
- Select colors
- List advantages and disadvantages of manufactured scaffolding components

Students develop self-management skills through the following activities:

- Demonstration of 'good-housekeeping'
- Establishing building time-lines
- Cleaning and caring for instruments

Additionally, students apply safety principles when they:

- Wear appropriate clothing
- Wear personal protective equipment

- Demonstrate safe habits when they use hand and power tools
- Adequately shore up and brace excavations
- Demonstrate safety practices when erecting and using scaffolds and ladders
- Demonstrate safe procedures when lifting and carrying
- Use fire extinguishers properly
- Demonstrate their ability to safely adjust and operate the following power equipment: circular saws, reciprocating saw, drills, screw guns, portable and stationary planes, routers and shapers, power nailers and staplers

Additionally, this practice addresses the following CCCS:

- Standard 4.1 – Mathematical problem-posing and problem solving skills were developed by relating the project to real-life situations.
- Standard 4.2 – Cooperative learning settings and team work enhance the students' confidence in and ability to discuss mathematical concepts.
- Standard 4.3 – The project promoted a greater understanding of the relationship between math, and the role it plays in real-life situations.
- Standard 4.10- The project allowed students the opportunity to use a variety of estimation strategies and recognize situations in which their estimations were appropriate.
- Standard 5.2 – Students develop problem-solving, decision-making and inquiry skills, that were reflected through their ability to formulate questions and hypotheses when planning, observing, interpreting and analyzing data, drawing conclusions and communicating the results for the project.
- Standard 5.4 – Students develop an understanding of technology as an application of scientific principles through the use of 3D Deck 3.0 and other technological programs.

3. **Describe the educational needs of students that the practice addresses. Document the assessment measures used to determine the extent to which the objectives of the practice have been met. Provide assessments and data to show how the practice met these needs.**

The practice addresses the following educational needs of the students:

1. goal setting
2. 'hands-on' learning
3. 'real-life' application
4. team building
5. metacognitive reflection
6. problem solving
7. independent thinking

These students learn to observe, identify and define problems. They are given the opportunity to use metacognition when they reflect on the finished project and think of the ways in which they solved the problem, tested their ideas and finally improved the process.

This process can be defined through the following steps:

1. Observation
2. Analysis
3. Developing a solution and design
4. Formulating a plan
5. Creating a working model of design ideas
6. Evaluating the design problems
7. Refining the design

The assessment measures used to determine the extent to which the objectives of the practice have been met include:

1. Homework – quality and accuracy - 5%
2. Class participation along with Performance tests to determine manual skills attained – 50%
3. Weekly quizzes – 10%
4. Unit Tests – 20%
5. Notebooks – 5%
6. Midterm and final exams – 10%

In the last 5 years approximately 30% of the students in this program have entered the field of building construction. Areas such as framing, finished carpentry, masonry, roofing, plumbing and heating, electricity, and other arms of the 'labor' force are representative of our efforts with our students. We have put our students in each of these and other areas of manufacturing.

4. **Describe how you would replicate the practice in another school and/or district.**

To replicate the practice in another school and/or district we would conduct a needs assessment in order to match the needs of the students to the community and to determine the common thread between learning and the need for the program. In that way, the students' needs would be matched to that of the community. In other words, does the community have projects to support the program?
The following is a brief list of community projects that would create a need for the replication of the program:

- Senior citizen repairs
- Local community repairs and projects